



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

ml

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,444	10/29/2003	Georg Michelitsch	450117-04804	6782

22850 7590 11/24/2006

C. IRVIN MCCLELLAND
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

MOON, SEOKYUN

ART UNIT PAPER NUMBER

2629

DATE MAILED: 11/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/696,444	Applicant(s) MICHELITSCH ET AL.	
	Examiner Seokyun Moon	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 16 and 18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 16-34** rejected under 35 U.S.C. 102(b) as being anticipated by Rosenberg et al. (US 2002/0109668, herein "*Rosenberg*").

As to **claim 16**, Rosenberg teaches a method for operating a haptic interface unit ("*interface device*") [par. (0012) lines 4-8 and par. (0025) lines 8-15], comprising:

receiving at least velocity information data with respect to at least one haptic device [par. (0076) lines 8-11];

generating interaction feedback force data ("*haptic effect*") based on and in dependence of at least the velocity information data [par. (0077) lines 7-13], the interaction feedback force data being representative for an interaction feedback force to be generated by the at least one haptic device [par. (0012) lines 8-12];

transmitting the interaction feedback force data to the at least one haptic device so as to generate the interaction feedback force [fig. 1];

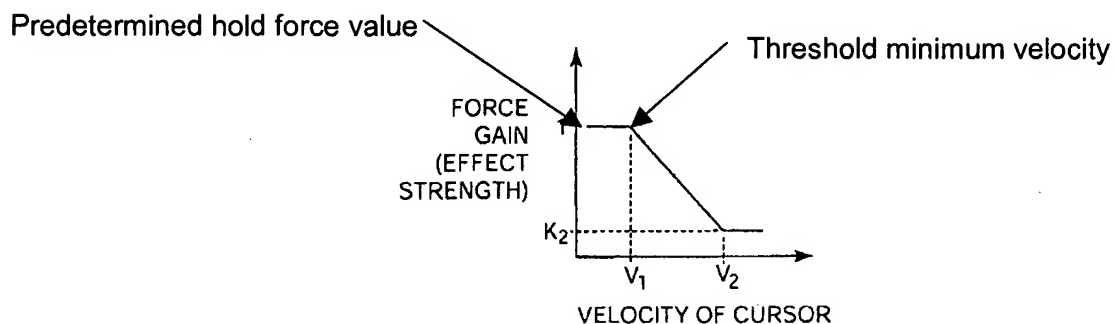
providing an inverted damping operation mode in which at least partially generating the interaction feedback force data to be representative for an interaction feedback force which

Art Unit: 2629

increases with a decreasing velocity, and the interaction feedback force data are at least partly generated to be representative for an interaction feedback force which decreases with an increasing velocity [fig. 5a] [par. (0079) lines 11-18], wherein the velocity is with respect to a respective haptic device or a pointing unit thereof [par. (0076) lines 8-11]; and

decreasing an absolute force value of the interaction feedback force or a vectorial component thereof to zero if the respective velocity or a vectorial component thereof increases above a given threshold maximum velocity value [fig. 5a and claim 26].

As to **claim 17**, Rosenberg [drawing 1 provided below, which is equivalent to Rosenberg's fig. 5b] teaches the method providing a holding force mode in which the absolute force value of the interaction feedback force or a vectorial component thereof is increased in a position dependent form [par. (0052)] to a predetermined hold force value larger than the interaction feedback force, if the respective velocity or a vectorial component thereof decreases below a given threshold minimum velocity value.



Drawing 1

As to **claim 18**, all of the claim limitations have already been discussed with respect to the rejection of claims 16 and 17.

As to **claim 19**, all of the claim limitations have already been discussed with respect to the rejection of claim 16.

Art Unit: 2629

As to **claim 20**, Rosenberg [fig. 5a] teaches the method performing the inverted damping operation mode with respect to vectorial components of the interaction feedback force and the velocity.

As to **claim 21**, Rosenberg [drawing 1 provided on page 3 of this Office Action] teaches the method performing the inverted damping operation mode with respect to vectorial components of the interaction feedback force and the velocity in an independent manner.

As to **claim 22**, Rosenberg [fig. 5a] teaches the method generating the interaction feedback force data to describe the interaction feedback force as a damping force, so as to generate an interaction feedback force acting against a given velocity or a vectorial component thereof [par. (0079) lines 11-18].

As to **claim 23**, all of the claim limitations have already been discussed with respect to the rejection of claim 22 since the feedback force acting against the given velocity or the vectorial component is considered as a counterforce or a frictional force to the velocity.

As to **claim 24**, Rosenberg [fig. 5a] teaches the method generating the interaction feedback force data to describe the interaction feedback force or a vertical component thereof as having an absolute force value f being, at least piecewise, a positive monotonically decreasing function g of the respective velocity v or of a vectorial component thereof to fulfill the relation $f(v) \propto g(v)$.

As to **claim 26**, Rosenberg [fig. 5a] teaches the method selecting the at least piecewise positive and monotonically decreasing function g to fulfill at least piecewise the relation $g(v) = 1 / |v|$, where v denotes a velocity or vectorial component thereof.

As to **claim 25**, all of the claim limitations have already been discussed with respect to the rejection of claim 26 since if g is a piecewise positive and monotonically decreasing function, then v is a piecewise positive and monotonically increasing function.

Art Unit: 2629

As to **claim 27**, Rosenberg [fig. 5a] teaches the method selecting the at least piecewise positive and monotonically decreasing function g to be at least piecewise one of a step function, a staircase function and a liner function.

As to **claim 28**, Rosenberg [par. (0052)] teaches the method generating the interaction feedback force data to describe the interaction feedback force as a force which is at least piecewise dependent on a scalar position or a vector position.

As to **claim 29**, Rosenberg [par. (0052)] teaches the method selecting the scalar position or vector position to describe a position of a respective haptic device or the pointing unit.

As to **claim 30**, Rosenberg [par. (0052)] teaches the method selecting the scalar position or vector position to describe a position of a corresponding abstract pointing means within a data structure.

As to **claim 31**, Rosenberg [par. (0052)] teaches the method selecting the scalar position or vector position to describe a position of a corresponding abstract pointing means within a graphical user interface.

As to **claim 32**, Rosenberg teaches a haptic interface unit comprising means for performing the disclosed operating method and the steps [abstract].

As to **claim 33**, Rosenberg teaches a computer program product, comprising computer program means adapted to perform the disclosed method and the steps for operating a haptic interface unit when it is executed on a computer or a digital signal processing means [par. (0027) lines 1-8].

As to **claim 34**, Rosenberg teaches a computer readable storage medium, comprising the disclosed computer program product [par. (0048)].

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seokyun Moon whose telephone number is (571) 272-5552. The examiner can normally be reached on Mon - Fri (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

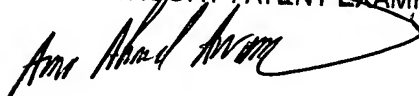
Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

November 15, 2006

S.M.

AMR A. AWAD
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read "Amr A. Awad", is written over a horizontal line.